

**AGREEMENT TO CREATE
AN INTERNATIONAL NETWORK (GDRJ)
“France-Japan-Vietnam Network in Singularity Theory”**

BETWEEN

The Centre National de la Recherche Scientifique, hereinafter referred to as CNRS, a public scientific and technological institution headquartered at 3, rue Michel-Ange, 75794 Paris Cedex 16, France represented by its President **Mr Alain FUCHS**,

Acting in its own name and on behalf of:

- the Institut de Mathématiques de Luminy (IML), Marseille, UMR6206,
- the Laboratoire J.A. Dieudonné, Nice, UMR6621,
- the Institut de Mathématiques de Jussieu (IMJ), Paris, UMR7586,
- the Institut de Recherche Mathématique Avancée (IRMA), Strasbourg, UMR7501

AND

The Université de la Méditerranée Aix-Marseille II, hereinafter referred to as Université de la Méditerranée, a public, scientific, cultural and professional institution, headquartered at 58, boulevard Charles Livon, 13284 Marseille cedex 07, France, represented by its President **Mr Yvon Berland**,

Acting in the name and on behalf of the Institut de Mathématiques de Luminy, UMR 6206.

AND

The Université de Nice Sophia Antipolis, hereinafter referred to as Université de Nice, a public, scientific, cultural and professional institution, headquartered at Grand Château 28 avenue Valrose BP 2135, 06103 Nice cedex 2, France, represented by its President **Mr Albert Marouani**,

Acting in the name and on behalf of the Laboratoire J.A. Dieudonné, UMR 6621.

AND

The Université de Paris Diderot Paris 7, hereinafter referred to as Université de Paris 7, a public, scientific, cultural and professional institution, headquartered at 5 rue Thomas Mann, 75013 Paris, France, represented its President **Mr Vincent Berger**,

Acting in the name and on behalf of the Institut de Mathématiques de Jussieu (IMJ), UMR 7586.

AND

CNRS acting on behalf of the Université Pierre et Marie Curie Paris 6, hereinafter referred to as UPMC, a public scientific, cultural and professional institution, headquartered at 4, place Jussieu, 75252 Paris Cedex 05, represented by its President **Mr Jean-Charles Pomerol**,

Acting in the name and on behalf of the Institut de Mathématiques de Jussieu (IMJ), UMR 7586.

AND

CNRS acting on behalf of the Université de Strasbourg, hereinafter referred to as Université de Strasbourg, a public scientific, cultural and professional institution, headquartered at 4 rue Blaise Pascal, CS 90032, 67081 Strasbourg cedex, France, represented by its President **Mr Alain Beretz**,

Acting in the name and on behalf of the Institut de Recherche Mathématique Avancée (IRMA), UMR7501

AND

The Hokkaido University, Sapporo, Japan, hereinafter referred to as Hokkaido University, a public autonomous institution, headquartered at Sapporo, Japan, represented by its Dean of the Graduate School of Science, **Mr Masakane Yamashita**,

Acting in the name and on behalf of the Graduate School of Science,

AND

The Kagoshima University, Kagoshima, Japan, hereinafter referred to as Kagoshima University, a public autonomous institution, headquartered at Kagoshima, Japan, represented by its Dean of the Graduate School of Science and Engineering, **Mr Yasuyoshi Fukui**,

Acting in the name and on behalf of the Department of Mathematics and Computer Science.

AND

The Kyushu University, Fukuoka, Japan, hereinafter referred to as Kyushu University, a public autonomous institution, headquartered at Fukuoka, Japan, represented by its Dean of the Faculty of Mathematics, **Mr Masanobu Kaneko**,

Acting in the name and on behalf of the Faculty of Mathematics.

AND

The Tokyo University of Science, Tokyo, Japan, hereinafter referred to as Tokyo University of Science, an autonomous institution, headquartered at Tokyo, Japan, represented by its Dean of the Graduate School of Science, **Mr Shizuo Miyajima**,

Acting in the name and on behalf of the Department of Mathematics.

AND

The Vietnam Academy of Science and Technology, hereinafter referred to as VAST, a national research organization, whose registered address is 18 Hoang Quoc Viet, Cau Giay, Ha Noi, Vietnam represented by its President, **Mr Chau Van Minh**,

Acting in the name and on behalf of the Mathematics Institute.

Hereinafter referred to individually as the “Party” or collectively as the “Parties”.

CONSIDERING

The Agreement of Scientific and Technological Cooperation between the Government of the French Republic and the Government of Japan signed in Tokyo, on July 2nd 1974

The Agreement for scientific and technological Cooperation signed in Hanoi on March 7th 2007 between the Government of the French Republic and the Government of the Socialist Republic of Vietnam.

The Agreement of Scientific Cooperation between the CNRS and the Japan Society for the Promotion of Science, hereinafter referred to as JSPS signed on May 16th 2005,

The Agreement for scientific and technical Cooperation signed in Paris on May 3rd 1983 and on November 16th 1998 between the Academy of Science and Technology of Vietnam and the Centre National de la Recherche Scientifique.

PREAMBLE

Singularity theory has a long history, that comes from the XIXth century (Puiseux, Noether and Halphen). It has been recognized as a branch of Mathematics in the 1950's, with fundamental works by Zariski, Whitney and Thom then Arnold, Hironaka, Milnor, Pham.

Singularity theory has been enriched by new and powerful tools such as D-modules, intersection homology, Hodge theory and, more recently, motivic integration. Researchers do not hesitate to tackle important and difficult problems such as the famous Jacobian Conjecture. The three countries involved, France, Japan and Vietnam played and play an important role in the subject:

Relations between France and Japan have been improved with the visits of Heisuke Hironaka in France. Exchange of researchers including young researchers has been developed by several bilateral agreements and a CNRS PICS (International Program of Scientific Cooperation) in singularity theory. Five Franco-Japanese congresses « Singularity Theory in Geometry and Topology » have been organized either in Japan or in France, as well as numerous workshops. Several Post-Doc researchers came from one country to the other. There is a long list of joint publications, including publications of the Franco-Japanese congresses.

Frédéric Pham and Lê Dung Trang played an important role in the development of Franco-Vietnamese cooperation in singularity theory, they gave various courses in universities in Vietnam. The visits of Alexander Grothendieck and Pierre Cartier in Vietnam should be also mentioned. Several students from Vietnam came to France to prepare a PhD thesis in singularity theory and bilateral agreements from CNRS or universities helped to develop the collaboration between these two countries. There is also a long list of joint publications.

Recently, cooperation between Japan and Vietnam developed a lot with impulse from Mutsuo Oka in Tokyo and Nguyen Viet Dung in Hanoi. Several Japan-Vietnam events in Singularity Theory have been organized, in particular in "Topology of Singularities and related Topics".

Aim of the GDRI « Singularities » is to promote contacts between the teams working in France, Japan and Vietnam in Singularity Theory. The project comprises algebraic, geometric and topological aspects of singularities of complex and real algebraic or analytic varieties as well as analytic aspects concerning vector fields or differential systems. One of the main objectives of the GDRI is to contribute to integration of young mathematicians, at PhD or Post-Doc levels or young teachers in universities. That will be realized through conferences, courses and workshops where will be transmitted the most important results and tools as well as global and particular viewpoints on the subject.

Activities of the GDRI will take into account local activities and national and international contacts between specialists of the subject, which have been recently developed.

It has been agreed as follows:

ARTICLE 1 – CREATION AND TERM

An International Research Network, a cooperative structure devoid of legal status, is hereby created by the parties for a term of four (4) years effective on January 1st 2011.

Its name is GDRI “France-Japan-Vietnam Network in Singularity Theory”

The Agreement creating this GDRI may be renewed by amendment. Any decision to renew shall be taken by the Parties following consultation with the Steering Committee and the Scientific Management Committee of the GDRI.

ARTICLE 2 – PURPOSE AND OBJECTIVES

2.1 - Purpose

The purpose of the GDRI “France-Japan-Vietnam Network in Singularity Theory” is to provide support for the coordination of the scientific activities described in Appendix 2 hereto, incorporated by reference herein.

For this purpose, the GDRI “France-Japan-Vietnam Network in Singularity Theory” undertakes to:

- Facilitate and encourage contacts and exchanges between researchers,
- Encourage co-operative actions,
- Develop conference programs which complement and harmonize with its research project,
- Encourage training actions.

2.2 - Objectives

Research domains are described in Appendix 2, the GDRI being centralized on the following subjects: local resolution and uniformisation, real and complex singularities of maps, stratifications, applications of D-modules and Hodge theory to singularities, motivic integration, toric varieties, hyperplane arrangements, etc...

ARTICLE 3 – COMPOSITION

The GDRI “France-Japan-Vietnam Network in Singularity Theory” is composed of the laboratories or teams set forth in Appendix 1 hereto.

All personnel contributing to the GDRI activities shall remain assigned to their home laboratory and institution.

The list of said personnel as of the date when the GDRI was created is set out in Appendix 1 “Composition of the GDRI”, incorporated by reference herein.

ARTICLE 4 – ORGANIZATION

4.1. – COORDINATORS

The Coordinators of the GDRI who are identified in Appendix 3 hereto are jointly appointed by the Parties for a term of four (4) years.

The GDRI Coordinators shall prepare the annual budget and submit the GDRI annual scientific and financial reports to the Parties, upon approval by the Scientific Management Committee.

4.2. – SCIENTIFIC MANAGEMENT COMMITTEE

The GDRI Scientific Management Committee shall be composed of nine (9) members.

The Scientific Management Committee shall be chaired by the GDRI Coordinators.

The Scientific Management Committee shall review the progress of the GDRI activities and assess the staffing and budgetary needs required for the GDRI. It shall approve the annual financial report.

The Coordinators may consult the Scientific Management Committee on any question relative to the GDRI.

The Scientific Management Committee shall meet at least once a year and as often as needed at the initiative of the Coordinators or a third of its members. As necessary and with the unanimous consent of the Committee members, these meetings may be held by videoconferencing.

4.3. – STEERING COMMITTEE

To coordinate the projects of the GDRI, the Parties shall form a Steering Committee including representatives from the Parties who are not members of the laboratories involved with the GDRI.

The Steering Committee is composed of nine (9) members:

a.) Three (3) French representatives:

- the Director of the Institute of the Mathematical Sciences and their Interactions of the CNRS or his/her representative,
- two representatives for the other French Parties

b.) Three (3) Japanese representatives:

- the President of the JSPS - Mathematical Section or his/her representative,
- two Directors of the Department of Mathematics or their representative, among the following Universities: Hokkaido, Tokyo University of Science, Kyushu, Kagoshima,

c.) Three (3) Vietnamese representatives:

- the President of VAST or his/her representative,
- the President of the VAST Mathematical Section or his/her representative
- one representative name by VAST

The GDRI Steering Committee's responsibilities include:

- advising on the GDRI activities prepared by the Coordinators and the progress of the common work, suggesting adjustments as necessary;
- deciding to incorporate new laboratories into the GDRI "France-Japan-Vietnam Network in Singularity Theory" after consulting the GDRI Scientific Management Committee;
- proposing modifications to the present Agreement.

The Steering Committee shall meet at least once every two (2) years or at the request of one-quarter (1/4) of its members. As necessary and with the unanimous consent of the Committee members, these meetings may be held by videoconferencing. It shall be chaired on a rotation basis by one of its members. It shall appoint one secretary per meeting.

It may invite any expert whose presence in it deems useful, in an advisory capacity, to attend its meeting, subject to the execution of a nondisclosure agreement by said expert.

It shall take decisions by a majority of three-quarters (3/4) of the Parties present or represented. Meeting minutes shall be taken for all Committee meetings. All minutes shall be distributed to the Parties.

The GDRI Coordinators shall attend the Steering Committee meetings in an advisory capacity.

ARTICLE 5 – FUNDING PROVISIONS

All Parties shall inform the GDRI Coordinators, prior to the start of every calendar year, of the provisional amount of funds which shall be allocated to the GDRI laboratories or teams for purposes of meeting the GDRI's objectives. The laboratories or teams shall inform the Coordinators of any funds originating from other sources which are available to the GDRI in fulfilling its objectives (Appendix 4).

On behalf of the laboratories or teams which make up the GDRI; the GDRI Coordinators shall prepare requests for resources to be submitted to potential sources of funds. The management body of the Coordinators shall collect the total number of funds granted by said fund sources, and shall be responsible for distributing the respective portion due to each of the laboratories or teams making up the GDRI. The management body of the Coordinators shall carry out this distribution with the consent of the GDRI Coordinators and Scientific Management Committee. The Coordinators shall submit the implementation reports requested by the funding sources and consult as necessary with the laboratory beneficiaries.

For purposes of drafting an annual GDRI evaluation, a statement of expenditures in the scope of the GDRI shall be sent by the participating laboratories or teams to the Coordinators at the end of every calendar year.

ARTICLE 6. – INTELLECTUAL PROPERTY RIGHTS

6.1 – Publications

All laboratories undertake to share all information required to carry out the joint research work with its partners. The Parties shall retain title to the information obtained from the research done prior to the creation of the "France-Japan-Vietnam Network in Singularity Theory" GDRI. The publication of scientific results shall be made as per the usual custom and practice of the scientific community, with the prior consent of all participants having contributed to the results.

Publications related to the joint research efforts of the "France-Japan-Vietnam Network in Singularity Theory" GDRI shall include reference to the GDRI Parties. Such publications shall bear the mandatory statement: "*Research conducted in the scope of the GDRI known as "France-Japan-Vietnam Network in Singularity Theory"*".

Throughout the term of the GDRI and for a subsequent period of two (2) years, all laboratories undertake to notify the GDRI Coordinators of any research to be published in the scope of the GDRI and to distribute it to the other laboratories or teams prior to publication.

In the event of conflict between the GDRI laboratories and teams and/or its Parties, no publication or paper may be delayed beyond three (3) months except where such publication or paper contains important information of an industrial, commercial or strategic nature related to the activities of certain Parties.

6.2. – Nondisclosure

Throughout the term of the Agreement and for a subsequent period of five (5) years, unless otherwise expressly agreed, the Parties shall refrain from disclosing to any third party any information obtained from another Party within the scope of the present agreement which had been previously designated as confidential by the originating Party.

In the event that the information contained in a proposed publication includes important information of an industrial, commercial or strategic nature, the decision regarding the nature and term of the nondisclosure shall be submitted to the GDRI Steering Committee.

None of the foregoing is intended to preclude:

- the submission of a thesis to examiners pursuant to the rules and usual practices of the Parties, subject where applicable to the execution of nondisclosure provisions whose the terms shall not be less restrictive than those set forth above.
- the fulfilment of a duty by a Party to provide a scientific activity report to the government or administrative organization to which it belongs. This report shall not be considered a public disclosure, but shall be deemed an internal document of the Party.

6.3. – Ownership and exploitation of results

6.3.1. – Principles

The Parties shall retain exclusive title to the research results, patented or not, held prior to this agreement coming into effect or that they hold outside the scope of this agreement. The other Parties shall in no way acquire rights arising out of this agreement over said research results.

“Results of the GDRI” herein is intended to indicate all research resulting from the GDRI activities, whether or not likely to be protected as intellectual property.

The Results, whether or not patentable, obtained in the scope of the present agreement, shall be jointly owned by the Parties having contributed to these results, in proportion to their respective contributions. All Parties hold a non-transferable right to use the Results obtained in the scope of the present agreement free of charge for their own research needs, with the exception of any activity, even free of charge, which is of an industrial or commercial nature.

6.3.2. – Software and databases

The Parties shall retain exclusive title to the software or databases that they developed prior to this agreement and/or falling outside its scope.

The Parties having jointly contributed to software development shall jointly hold rights therein, as well as in the extensions jointly obtained by the Parties, no matter which Party was the initial holder of the rights in the base software from which such later extensions were derived. “Extension” is intended to mean a piece of software from which it is derived.

The Parties having contributed to their development are co-owners of the rights in databases developed jointly, including both their structure and content.

The Parties shall enjoy the non-transferable right to use the joint software and databases free of charge for purposes of meeting the GDRI needs. For the joint databases, this usage right applies to both the structure and content and includes the rights of extraction.

The author's names of the joint software should be mentioned anytime they are communicated or distributed.

ARTICLE 7 – MISCELLANEOUS

7.1. – Membership

All additions to the network of a new laboratory of one of the parties require the consent of the Steering Committee.

The addition of new parties to the network shall become effective on the date they shall adhere to the GDRI by the signature of an accession Amendment to this Agreement. The CNRS may sign the accession Amendment on behalf of the Existing Parties following a unanimous decision of the Steering Committee's members present or represented. Only the Appendixes can be modified in the accession amendment.

7.2. – Withdrawal

One or more laboratories making up the "France-Japan-Vietnam Network in Singularity Theory" GDRI may withdraw upon request, provided that six (6) months' prior notice is given to the Parties.

7.3. – Exclusion

In the event of insufficient participation in reaching the objectives of the GDRI or negligent failure to perform a Party's duties, the GDRI Steering Committee may exclude one or more laboratories or teams, after consultation with the Scientific Management Committee.

Such a decision requires the unanimous vote of the Steering Committee members present, excluding the concerned representative(s) from voting and with at least three-quarter (3/4) of the Steering Committee member representatives voting.

7.4. – Cancellation

This agreement may, for exceptional and justifiable reasons, be cancelled before the term defined in Article 1 has expired, upon six (6) months' prior notice. In such a case, the Parties shall endeavor to complete pending joint activities.

The decision to cancel shall be taken by the Parties, following consultation with the Steering and Scientific Management Committees.

7.5. – Disputes

In the event of difficulties related to the interpretation or performance of this Agreement, the Parties shall endeavour to settle their dispute out of court.

If no settlement out of the Court is possible, the applicant shall ask for the settlement of the dispute before an arbitration court, which shall rule in accordance with the rules of international law. Unless the parties decide otherwise in writing, the arbitration regulation of an international arbitral shall apply.

This Agreement is delivered in nine (9) originals, in English.

In

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For the Centre National de la Recherche Scientifique

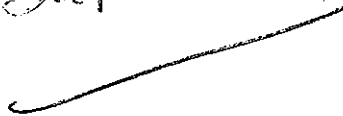
**Pour le Président et par délégation
le Directeur général délégué à la science**

Alain FUCHS,

President

Joël BERTRAND

Joël Bertrand

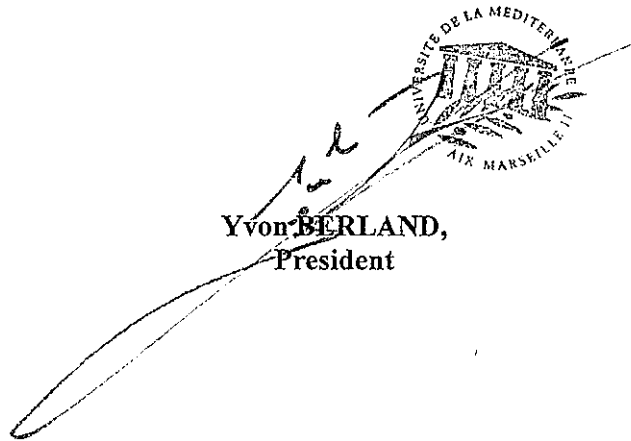


In

, on

29 AOUT 2011

For the Université de la Méditerranée



Yvon BERLAND,
President



In

, on

For the Université de Nice Sophia Antipolis,



**Albert MAROUANI,
President**

In , on

For the Université de Paris Diderot – Paris 7

A handwritten signature in black ink, appearing to be 'V. Berger', written over a faint, dotted grid.

Vincent BERGER,
President

In , on

For the Hokkaido University,

A handwritten signature in black ink, appearing to read "M. Yamashita". The signature is written in a cursive style with a large, looped initial "M" and a long, sweeping tail for the "ita" part of "Yamashita".

**Masakane YAMASHITA
Dean of the Faculty of Science**

In

, on

For the Kagoshima University

A handwritten signature in black ink, consisting of stylized Japanese characters, positioned above the printed name.

Yasuyoshi FUKUI

Dean of the Graduate School of Science and Engineering

In *Fukuoka*, on *Sept. 5, 2011*

For the Kyushu University

A handwritten signature in black ink, appearing to read 'M. Kaneko'.

Masanobu KANEKO
Dean of the Faculty of Mathematics

In *Tsuyo*, on *Aug 30, 2011*

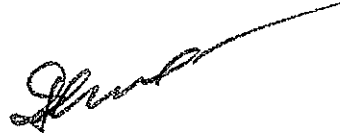
For the Tokyo University of Science

Shizuo Miyajima

**Shizuo MIYAJIMA,
Dean of the Graduate School of Science**

In , on

For the Vietnam Academy of Science and Technology

A handwritten signature in black ink, appearing to read 'Chau Van Minh', with a long, sweeping flourish extending to the right.

CHAU Van Minh
President of Vietnam Academy of Science and Technology

Appendix 1
COMPOSITION OF THE GDRI

France:

Université de la Méditerranée, Institut de Mathématiques de Luminy, UMR 6206

Jean-Paul Brasselet, DR CNRS

Anne Pichon, Maître de Conférences

Guillaume Rond, Maître de Conférences

Université de Nice, Laboratoire J.A. Dieudonné, UMR 6621

Alexandru Dimca, Professeur

Adam Parusinski, Professeur

Universités de Paris VI et Paris VII, Institut de Mathématiques de Jussieu, UMR 7586

Bernard Teissier, Directeur de Recherche CNRS

Université de Strasbourg, IRMA, UMR 7501

Vincent Blancéil, Maître de Conférences

Japan:

Hokkaido University:

Goo Ishikawa, Professor

Shyuichi Izumiya, Professor

Toru Ohmoto, Associate Professor,

Kaoru Ono, Professor

Tatsuo Suwa, Professor Emeritus

Hiroaki Terao, Professor

Kagoshima University

Kimio Miyajima, Professor

Takehiko Yasuda, Associate Professor

Shoji Yokura, Professor,

Kyushu University,

Osamu Saeki, Professor,

Tokyo University of Science

Mutsuo Oka, Professor

Vietnam:

Vietnam Academy of Science and Technology

Nguyen Viet Dung, Professor,

Ha Huy Vui, Professor

Nguyen Van Chau, Professor,

Vu The Khoi, Dr.

Dinh Sy Tiep, Dr.

Appendix 2

1. SCIENTIFIC TOPICS

One of the main objectives of the GDRI is to contribute to integration of young mathematician, at PhD or Post-Doc levels or young teachers in universities. That will be realized through conferences, courses and workshops.

Aim of the GDRI is to gather the research teams working in singularity theory of algebraic or analytic varieties and maps between these varieties. The project includes the algebraic, topological and geometric aspects as well as analytic viewpoint related to differential systems coming from geometric objects.

Singularity theory has a long history, starting in XIXth century. From years 1950, it is recognized as a branch of mathematics, following fundamental works of Zariski, Whitney and Thom, then Arnold, Hironaka, Milnor, Pham...

During the last 30 years, the Singularity Theory has been enriched with new and powerful technical tools like D-modules, intersection homology, Hodge theory and more recently motivic integration. France, Japan and Vietnam played an important role in the development.

Objective of the GDRI is to transmit to young mathematicians, from the three countries, the most important tools and a global view on the subject, by bi- or tri-lateral workshops, schools and conferences and through animation of an international network. Hope is to develop the existing relationships at the international level.

The main research themes are the following: local resolution and uniformisation, valuation theory, real and complex singularities of spaces and of maps, stratifications, intersection homology, characteristic classes, local and global invariants of singular varieties, applications of D-modules and Hodge theory to singularities, b-functions and vanishing cycles, analytic arcs and motivic integration, toric varieties, arrangements...

2. SCIENTIFIC ACTIVITIES

Integration of young mathematician will be realized through bi- or tri-lateral conferences, courses and workshops. An international network will be put in place in order to promote exchange of information, research papers and notes of courses.

Stays of senior researchers will be encouraged with a double objective: research collaboration between senior researchers and, mainly, research training of young researchers (high level courses, common papers co-authored by senior and young researchers).

The Scientific Management Committee will decide organization and management of the events, as well as necessary means to fulfill the objectives.

The following events are scheduled in 2011 (see Appendix 4):

Japan-Vietnam Workshop, to be held in Sendai, January 2011.

Franco-Japanese Workshop, to be held in Fukuoka and Kagoshima, September 2011.

Appendix 3

COORDINATORS

For the French side, Mr. Jean-Paul BRASSELET is the coordinator of the GDRI for the first term. He is assisted by Mrs. Anne PICHON.

For the Japanese side, Mr. Mutsuo OKA is the coordinator of the GDRI for the first term. He is assisted by Mr. Toru OHMOTO.

For the Vietnamese side, Mr. Viet Dung NGUYEN is the coordinator of the GDRI for the first term.

Appendix 4

BUDGET

Projects in 2011:

A – Continuation of previous bilateral events:

1. Japan-Vietnam Workshop: Topology of singularities and related topics
JSPS-VAST Japan-Vietnam Bilateral Joint Projects
Sendai, Japan, January 5 - 9, 2011.

- Participation of 1 or 2 French researchers, in order to prepare future actions of the GDRI.

2. Vith Franco-Japanese Symposium: Singularities and Applications
Fukuoka and Kagoshima, September 2011:

- More than 15 French Researchers will participate in the event.
- The GDRI will contribute to the funding of 5 of them.
- Vietnamese researchers will be invited as well.

B – Research and Training of young researchers:

Stays of Japanese and Vietnamese researchers in France:

- 10 weeks of Japanese or Vietnamese researchers will be scheduled in French laboratories during year 2011.

Stays of French researchers in Japan:

- 3 stays of French researchers will be scheduled in Japanese laboratories during year 2011.

Stays of French researchers in Vietnam:

- 3 stays of French researchers will be scheduled in Vietnamese laboratories during year 2011.